# **The Digestive and Urinary Systems Discussion Guide (for use during or after reading)**

1. What is the digestive system’s main purpose? (Why Eat?, p. 4-5)
   1. The digestive system serves the body by breaking down the food we eat into microscopic molecules that travel through our bloodstream to provide nutrients and other needed substances to the cells throughout our body.
2. What are nutrients? Describe the different types and how they are used in the body. (Nutrition, p. 6-7)
   1. Nutrients are chemicals found within food that we need in order to be healthy. Nutrients include proteins, fats, carbohydrates, vitamins, and minerals. Proteins make up the majority of your cells. Fats and carbohydrates provide energy for your body. Vitamins and minerals are used to grow and repair the body. Your body also needs water to survive because about 2/3 of your body is made up of water!
3. How does the circulatory system play a role in digestion? (Digestion, p. 8-9)
   1. Digestion is the process of breaking down food into tiny pieces called molecules. The molecules enter the bloodstream, and the circulatory system helps them travel throughout the body to the cells that need nutrients.
4. Explain how the food we eat travels through the digestive system. (Parts of the Digestive System, p. 10-11)
   1. Food first enters your digestive system through the mouth. Then it passes through a long tube called the esophagus and into the stomach. After being broken down in the stomach, food enters the small intestine where it is broken down even more. The liver and pancreas also play a role in digesting food. Food also passes through the large intestine. What cannot be digested is stored in the rectum until it is ready to exit the body through the anus.
5. What role do the structures of your mouth play in digestion? What happens to the food as it travels through your esophagus? (The Mouth, p. 12-13)
   1. Digestion begins in the mouth. Teeth begin this process by breaking down larger bites of food into pieces small enough to swallow and travel through the esophagus. However, other structures in your mouth also aid in digestion! Saliva is used to help break down nutrients like carbohydrates.
   2. After swallowing your food, it travels through your esophagus. Here, muscles lining the esophagus contract and relax to force the food to move down toward the stomach. The esophagus also contains glands that produce mucus that helps the food slide down toward the stomach.
6. How do the small intestine, liver, and pancreas aid in digestion? (The Small Intestine, p. 16-17)
   1. After leaving the stomach, partially digested food makes its way to the small intestine. The liver and pancreas send juices, including bile, to the small intestine to help aid in further digestion. Digested food passes over tiny structures called villi in the small intestine. Here, most nutrients enter the blood vessels so they can travel to cells throughout the body.
7. What are feces, where are they stored, and how do they exit the body? (The Large Intestine, p. 20-21)
   1. Feces, another term for bodily waste, contains about 2/3 water. The rest of feces is made up of solid materials such as plant fiber and bacteria. Feces are stored in your rectum until you are ready to pass them through your anus and out of your body.
8. What is the urinary system’s main purpose? (The Urinary System, p. 22-23)
   1. The urinary system’s main purpose is to excrete waste substances from the body. However, the urinary system focuses on getting rid of waste created by your cells as they use nutrients. This waste is released into the blood. Waste flows through the urinary system where the kidneys filter it into urine before removing it from the body.
9. Explain how waste moves through the urinary system before being removed from your body. (The Urinary Tract, p. 26-27)
   1. Blood containing nutrient waste from cells enters the kidneys where it is filtered. The kidneys return some water and any important chemicals to the body before turning the remaining water and waste into urine. Next, this urine travels from the kidneys through the ureters and into the bladder. The bladder can expand to hold this urine until the body is ready to release it through the urethra.
10. According to the text, what can you do to keep your digestive and urinary systems healthy? (Healthy Decisions, p. 28-29)
    1. According to the text, one of the best ways to support your digestive and urinary systems is to drink plenty of water. In addition, it is important to make sure you get enough dietary fibers from your meals. Eating healthy foods like vegetables is a great way to do this!